

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-21 (Cancelled)

22. (Currently Amended) A flaw detection system using acoustic Doppler effect for detecting flaws in a medium wherein there is relative motion between the medium and system comprising:

air-coupled transducer means, spaced from the medium to be inspected, which transmit optical energy for introducing to and sensing receiving from the medium an acoustic signal that propagates in said medium at a predetermined frequency; and means, responsive to the sensed received propagating acoustic signal, for detecting in the sensed received acoustic signal the Doppler shifted frequency representative of a flaw in the medium.

23. (Currently Amended) The flaw detection system using acoustic Doppler effect of claim 22 in which said transducer means includes a laser for transmitting said optical energy.

24. (Currently Amended) A flaw detection system using acoustic Doppler effect for detecting flaws in a medium wherein there is relative motion between the medium and

system comprising:

air-coupled transducer means, spaced from the medium to be inspected, for introducing to and sensing from the medium an acoustic signal that propagates in said medium at a predetermined frequency said transducer means including a ~~laser vibrometer~~ ~~interferometer~~ an acoustic receiver for sensing the acoustic signal propagating in the medium and a transmitter that transmits optical energy.

25. (Currently Amended) A flaw detection system using acoustic Doppler effect for detecting flaws in a medium wherein there is relative motion between the medium and system comprising:

air-coupled transducer means, spaced from the medium to be inspected, for inducing an acoustic signal to propagate in the medium at a predetermined frequency and sensing receiving the propagating acoustic signal in the medium; and said transducer means including a transmitter and a receiver and said transmitter including a laser for locally heating the medium to generate acoustic signals; and

means, responsive to the sensed received propagating acoustic signal, for distinguishing the Doppler shifted frequency representative of a flaw in the medium.

26. (Currently Amended) A flaw detection system using acoustic Doppler effect for detecting flaws in a medium wherein there is relative motion between the medium and system comprising:

an air-coupled transducer, spaced from the medium to be inspected, that transmits optical energy for introducing to and sensing receiving from the medium an

acoustic signal that propagates in said medium at a predetermined frequency; and
a detector, responsive to the sensed received propagating acoustic signal,
that detects in the sensed received acoustic signal the Doppler shifted frequency
representative of a flaw in the medium.

28. (Currently Amended) A flaw detection system using acoustic Doppler effect
for detecting flaws in a medium wherein there is relative motion between the medium and
system, comprising:

an air-coupled transducer, spaced from the medium to be inspected, that
introduces to and senses from the medium an acoustic signal that propagates in said
medium at a predetermined frequency, said transducer including a ~~laser vibrometer~~
~~interferometer~~ an acoustic receiver that senses the acoustic signal propagating in the
medium and a transmitter that transmits optical energy.

29. (Currently Amended) A flaw detection system using acoustic Doppler effect
for detecting flaws in a medium wherein there is relative motion between the medium and
system, comprising:

an air-coupled transducer, spaced from the medium to be inspected, that
induces an acoustic signal to propagate in the medium at a predetermined frequency and
senses receives the propagating acoustic signal in the medium, said transducer including a
transmitter and a receiver, said transmitter including a laser that locally heats the medium
to generate acoustic signals; and

means, responsive to the sensed received propagating acoustic signal, for distinguishing the Doppler shifted frequency representative of a flaw in the medium.